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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,223	11/26/2003	Jean-Francois Savaria	86267-39	5690
7590 Stephan P. Georgiev SMART & BIGGAR Suite 3400 1000 de la Gauchetiere Street West Montreal, Quebec, H3B 4W5 CANADA		02/22/2008	EXAMINER CRUPEAU, JONATHAN	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 02/22/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/721,223

Applicant(s)

SAVARIA ET AL.

Examiner

Jonathan S. Crepeau

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/6/08 has been entered.

This Office action addresses claims 1-4 and 7-20. The rejections over WO '433 and Kelly have been obviated. However, the rejections of claims 1-4, 7-13, 18 and 19 over Greenbaum et al. are maintained for substantially the reasons of record. Additionally, claims 1-3, 14-18, and 20 are subject to new grounds of rejection herein. This action is non-final.

Claim Rejections - 35 USC § 102

2. Claims 1-4, 7, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Greenbaum (U.S. Patent 5,022,555). The reference is directed to a container for holding a liquid. The casing is formed from a multi-layer structure as best shown in Figs. 1-6. A carrier film (16) is wrapped around PVC piping (12) to form an inner liner (18) of the container (see col. 2, line 44 et seq.). A barrier film (20) is then formed on the outside of the carrier film and may also be considered to be part of the claimed lining. A further layer of carrier film (16) is then formed thus creating a shell (22). Regarding claim 1, the shell may be reinforced with piping (24) to

create ribs on the outside thereof. The inner lining may comprise a laminate of two synthetic materials having moisture and humidity barrier properties (see col. 3, line 1). Regarding claim 4, the laminates may include metallized films (see col. 5, line 50). Regarding claims 1 and 7, the shell may comprise adhesive layers reinforced with glass frit additives (see col. 5, line 39). Regarding claim 18, the shell may comprise polyethylene (see col. 4, line 30) or epoxy (see col. 5, line 18). Regarding claim 20, the apparatus is an “energy storage device” because it can contain energy in the form of heat, potential energy, etc.

Thus, the instant claims are anticipated.

3. Claims 1-3, 14 and 20 are rejected under 35 U.S.C. 102(c) as being anticipated by Asahina et al (U.S. Pre-Grant Publication No. 2003/0027040). The reference teaches a battery comprising a casing comprising a rigid structural shell (3) and an inner lining (11) joined to the inner surface of the shell (see Figs. 1-4). The shell comprises a molded polymer material (see [0066]) and comprises ribs on the outer surface thereof (see Figures 1 and 4). The liner comprises one layer or a multi-layer laminate of synthetic material and is impervious to oxygen and humidity (see [0045], [0047]). Regarding claim 14, a cover (6) is sealed to the top of the container.

Thus, the instant claims are anticipated.

Claim Rejections - 35 USC § 103

4. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greenbaum.

The reference is applied to claims 1-4, 7, and 18-20 for the reasons stated above.

However, the reference does not expressly teach that the structural shell is made of a molded plastic material reinforced with a plurality of discrete metallic portions, as recited in claim 8.

However, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the recitation of discrete metallic portions is not considered to patentably distinguish over the reference. As stated above, Greenbaum teaches that the layers of the lining and/or shell may comprise metallized films. Although the specific implementation and configuration of the metallized films is not disclosed by Greenbaum, it would be well within the skill of the art to use “discrete portions” as opposed to a continuous portion when constructing the container of Greenbaum. In general, it has been held that making elements separable is matter of design choice to one skilled in the art absent evidence to the contrary (MPEP 2144.04). Further, the specific configurations recited in claims 9-13 are not considered to distinguish over the reference. These claims recite a molded structure, an embedded structure, and a fastening structure comprised of perforations in the metal and mating projections in the plastic. Each of these structures would be obvious to a person of skill in the art, since the artisan would be sufficiently skilled to adhere the metal layer to other layers by any means known, including molding, embedding, and fastening with perforations. As such, none of the claimed structures is seen to patentably distinguish over Greenbaum.

5. Claims 1-3, 14-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 9-259840 in view of Hamada et al (U.S. Patent 5,510,203).

JP '840 is directed to a lead-acid or alkaline secondary battery (see [0001] of translation). The battery comprises a jar (rigid structural shell) comprising a plastic such as polypropylene (see abstract). A liner made of vinylidene chloride resin is joined to the inner surface of the structural shell (see abstract). The liner is impervious to oxygen and humidity (see [0010]). Regarding claims 2 and 3, the liner may further comprise additional layer(s) of synthetic material see [0018]).

JP '840 does not expressly teach that the jar is reinforced with ribs, as recited in claim 1, or that the battery comprises a cover welded to the jar, as recited in claims 14 and 15, or the structure of the cover as recited in claims 16 and 17.

Hamada et al. is directed to an alkaline storage battery comprising a resin shell reinforced with ribs (21) (see Figure 1). The battery has a cover (13) having metallic electrical connectors (14, 15) therethrough that is welded to the shell (see col. 4, line 22). Regarding claim 17, the connectors may be considered to be "reinforcement metallic portions" that are "lined at least in part" with the synthetic material of the cover.

Therefore, the invention as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because the artisan would be motivated to use the ribs and the cover structure of Hamada et al. in the battery of JP '840. In column 2, line 55, Hamada et al. teach the following:

Another object of the present invention is to provide a battery which is free of deformation or breakage of the casing or displacement of the unit or pack battery after repetitive charging and discharging or long time operation, and which can efficiently dissipate the heat generated in the battery at the time of charging and discharging out of the battery system, thereby leading to a superior constant battery performance.

Accordingly, the artisan would be motivated to incorporate the ribs and the cover structure of Hamada et al. into the battery of JP '840. It is further believed that the claimed invention is obvious because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Response to Arguments

6. Applicant's arguments filed February 6, 2008 have been fully considered but they are not persuasive. Regarding the Greenbaum reference, Applicants state that Figures 1-6 and 8 of Greenbaum represent a single embodiment and that the container must contain the perforations shown in Figure 8. Applicants then state that "Greenbaum does not teach a casing comprising an inner lining substantially impervious to oxygen and humidity." Even if, assuming *arguendo*, that the container must include the perforations, as asserted by Applicants, it is the Examiner's position that the claim language still reads on the reference. Claim 1 recites, as part of the casing, "an inner lining substantially impervious to oxygen and humidity." It is submitted that

the inner lining material *per se* of Greenbaum is impervious to oxygen and humidity. While the casing shown in Figure 8 of Greenbaum has perforations allowing liquid to enter the casing, there is no requirement in the instant claims that the casing is hermetically sealed so as to not allow any oxygen or humidity into or out of the casing. Thus, the casing of Greenbaum does in fact comprise "an inner lining substantially impervious to oxygen and humidity," as claimed, however, the casing is configured to allow the passage of materials into and out of the casing. It is further noted that in all of the embodiments of Greenbaum, the casing comprises a conduit with a valve, which functions to permit ingress and egress of fluid into the casing. Applicant has *not* made the argument that the breach in the lining caused by this conduit renders the lining passable or pervious to oxygen and humidity. Similar to the perforations, the pipe/valve configuration is a structural attribute of the casing and does not negate the fact that the lining is still "impervious to oxygen and humidity." Accordingly, the rejection over Greenbaum is believed to be proper and is maintained herein.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan Crepeau whose telephone number is (571) 272-1299. The examiner can normally be reached Monday-Friday from 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan, can be reached at (571) 272-1292. The phone number for the

organization where this application or proceeding is assigned is (571) 272-1700. Documents may be faxed to the central fax server at (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jonathan Crepeau/
Primary Examiner, Art Unit 1795
February 27, 2008